Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~Voltage~~ A voltage booster device ~~(3) such as to selectively assume an active status and a stand-by status, said device~~ comprising:

~~—~~a first terminal ~~(15) such as to assume~~ being connectable to a respective electric potential and associated to a first capacitor ~~(16)~~,

~~—~~a second terminal ~~(10) associated~~ being connectable to a second capacitor ~~(11)~~ and selectively connectable to the first terminal ~~(15)~~,

~~characterised in that it also comprises circuital means for discharging (100)~~ a discharge circuit coupled to the first capacitor for reducing ~~in module~~ the electric potential of the first terminal ~~(15)~~, the ~~circuital~~ discharge circuit means being activated to function when said device is in the stand-by status and the second terminal ~~(10)~~ is disconnected from said first terminal ~~(15)~~.

2. (Currently Amended) The device ~~(3)~~ according to claim 1, wherein said discharge circuit ~~circuital means (100) make~~ makes it possible to discharge the first capacitor ~~(16)~~ in order to avoid perturbations of said second terminal ~~(10)~~ due to interactions between the first and second capacitor that can occur when the first and second terminals are connected.

3. (Currently Amended) The device ~~(3)~~ according to claim 1, wherein said discharge circuit ~~circuital means (100) comprise~~ comprises:

a discharge device ~~(106)~~ connectable to said first terminal ~~(15)~~ and such as to cause a discharge current ~~(Idisch)~~ of the first capacitor ~~(16)~~ when the said electric potential is higher in module than a preset value, the discharge device ~~(106)~~ being

enablable/disableable ~~to/from function~~ by means of a first command signal ~~(PMPDISCH)~~.

4. (Currently Amended) The device ~~(3)~~ according to claim 3, wherein said discharge circuit ~~circuital means (100)~~ also ~~comprise~~ comprises:

a detection circuit ~~means (104,105) such as~~ to generate the first command signal ~~(PMPDISCH)~~ of the discharge device ~~(106)~~ starting from a first voltage ~~(V-DIV)~~ correlated to the electrical potential of the first terminal ~~(15)~~.

5. (Currently Amended) The device ~~(3)~~ according to claim 4, wherein said ~~means of~~ detection circuit ~~(104,105) comprise~~ comprises:

a voltage comparator ~~(105)~~ for comparing the first voltage ~~(V-DIV)~~ with a reference voltage ~~(VREF)~~, said voltage comparator supplying ~~in~~ as an output the first command signal ~~(PMPDISCH)~~.

6. (Currently Amended) The device ~~(3)~~ according to claim 4, wherein said discharge device ~~(106)~~ includes a MOSFET ~~(108)~~ having a control terminal connected to said detection ~~means~~ circuit for receiving the first command signal ~~(PMDISCH)~~.

7. (Currently Amended) The device ~~(3)~~ according to claim 5, wherein the detection ~~means~~ circuit ~~(104,105) comprise~~ comprises:

a voltage divider ~~(104)~~ connected to said first terminal ~~(15)~~ and such as to provide said first voltage to the voltage comparator ~~(105)~~.

8. (Currently Amended) The device ~~(3)~~ according to claim 1, comprising:

a booster stage ~~(12)~~ connected to said first terminal in order to supply the electric potential greater ~~in module~~ than a supply voltage of the device ~~(3)~~.

9. (Currently Amended) The device ~~(3)~~ according to claim 8, also comprising:

a voltage regulator stage ~~(17)~~ that can be connected to the booster stage ~~(12)~~ in the active status in order to receive said electric potential and to supply an operative voltage on the second terminal ~~(10)~~.

10. (Currently Amended) The device ~~(3)~~ according to claim 1, also comprising:

a voltage booster stage ~~(5)~~ in order to raise in voltage the second terminal ~~(10)~~ when the device is in the stand-by status and the first and second terminal are disconnected.

11. (Currently Amended) The device ~~(3)~~ according to the claim 10, wherein the voltage boost stage ~~(5)~~ also makes it possible to raise in voltage the first terminal ~~(15)~~ connected to the second terminal ~~(10)~~ when, in the stand-by status, the said ~~circuital means~~ discharge circuit is ~~for discharging (100) are~~ deactivated.

12. (Currently Amended) The device ~~(3)~~ according to claim 1 provided with at least one input for receiving a second command signal ~~(SB)~~ such as to take the device into the stand-by status or into the active status.

13. (Currently Amended) The device ~~(3)~~ according to claim 12, wherein the discharge circuit ~~circuital means (100) comprise~~ comprises:

a commutation means ~~(101, 102)~~ destined to electrically connect/disconnect the first terminal ~~(15)~~ to/from the second terminal ~~(10)~~, said means of commutation being commanded by at least one piloting signal of commutation ~~(PMPCONHV_N, REGCONHV_N)~~.

14. (Currently Amended) The device ~~(3)~~ according to claim 13, wherein said discharge circuit ~~circuital means (100)~~ also ~~comprise~~ comprises at least one circuit ~~(109;110)~~ for the generation of said at least one piloting signal of commutation ~~(PMPCONHV_N, REGCONHV_N)~~ starting from said second command signal ~~(SB)~~ and from a signal ~~(LOWPMP)~~ representative of the reduction of said electric potential following discharge of the first capacitor ~~(16)~~.

15. (Currently Amended) The device according to claim 9, also comprising:

additional voltage booster means ~~(112; 113)~~ of said first terminal ~~(15)~~ when said device is taken into the active status after a period in the stand-by status and for a preset interval of time, said additional means supplying to the first terminal ~~(15)~~ electric charge in order to compensate an initial absorption of current from said first capacitor ~~(16)~~ that occurs on entry into the active status.

16. (Currently Amended) The device according to claim 15, wherein said additional means ~~(112;113)~~ are such to supply electric charge in order to support at least one static supply current of said regulator stage ~~(17)~~.

17. (Currently Amended) The device according to claim 15, wherein said additional means ~~(112;113)~~ are such to supply at least one transient current in order to compensate a transient current absorption by a charge that can be connected to said second terminal ~~(10)~~ of the voltage regulator ~~(17)~~.

18. (Currently Amended) The device according to claim 15, wherein said additional means comprise an additional charge pump booster ~~(112)~~ of the rapid activation type.

19. (Currently Amended) The device according to claim 15~~,~~ wherein said additional means ~~(113)~~ comprise a first piloting element ~~(B1)~~ connected to at least a first compensation capacitor ~~(CB-dc)~~ connected to the first terminal ~~(15)~~, said first capacitor being piloted by said first piloting element ~~(B1)~~ in order to supply electric charge starting from which is obtainable said at least one static current.

20. (Currently Amended) The device according to the claim 19, also comprising a second compensation capacitor ~~(CB-WL1)~~ associated to said first compensation capacitor ~~(CB-dc)~~ that can be piloted by said first piloting element ~~(B1)~~ in order to supply electric charge from which said transitory current is obtainable.

21. (Currently Amended) The device according to claim 20~~,~~ wherein said additional means ~~(113)~~ include at least one second piloting element ~~(B2, Bn)~~ connected to at least one second compensation capacitor in such a way as to supply electric charge in order to support a further transient current and compensate an absorption of current by part of a further charge that can be connected to said second terminal ~~(10)~~.

22. (Currently Amended) Non-volatile memory system comprising:

~~———~~a matrix of memory cells ~~organised~~organized in rows and columns,

~~———~~a voltage booster device ~~(3)~~ for boosting in module a supply voltage and supplying an operative voltage to said memory matrix, ~~characterised in that~~ said voltage booster device ~~is realized~~ being constructed according to claim 1 ~~at least one of the previous claims~~.